

CALFED Bay-Delta Program System Integrity Workplan

Purpose:

The purpose of this workplan is to develop a detailed description of the Delta Long-Term Levee Improvement Plan including elements of levee maintenance and improvement, subsidence control, cost sharing (ability to pay) procedures, beneficial reuse of dredge material, habitat banking, seismic susceptibility, emergency response, and continued for the System Integrity Common Program.

This effort is enhancing the information developed by the Levee and Channel Technical Advisory Committee of the Bay Delta Oversight Council and continues the coordination (linkage) between levees, fisheries, and terrestrial issues.

Approach:

The Department of Water Resources is currently leading an effort to define his program with input from various interests including Delta residents, State and federal agencies, and Delta agencies such as local reclamation districts and the Delta Protection Commission. This effort in proposing refined definitions of the elements of the overall plan is currently being coordinated by Curt Schmutte through the Levee and Channel Technical Team. CALFED Bay-Delta Program staff is coordinating with this and other groups during the alternative development, refinement and evaluation process by monitoring, reviewing, and providing input to the proposed plan.

It is proposed that the Levee and Channel Technical Team continue in the development of the Delta Long-Term Levee Improvement Plan in coordination with the various interests identified above as well as other groups that are involved in related activities. An example of a related activity could be the generation of habitat along levee slopes which would be done in coordination with the BDAC Ecosystem Workgroup and the Agency Ecosystem Review Team.

The elements necessary to address the issues relevant to implementing the Delta Long-Term Levee Improvement Plan include the following:

- Formation of technical sub-teams to address specific issues related to levee habitat, land subsidence, beneficial reuse of dredge material, and seismic susceptibility.
- Priorities and actions within the Special Habitat Improvements and Flood Control Projects Program. This element is expected to be the item requiring the most activity by consultants working with the Levee and Channel Technical Team. Important aspects of this element will include identification and prioritization of flood control needs and levee habitat needs providing the highest public benefits. In addition, islands that are recognized as being essential for protection of public benefits, but are at increased risk due to greater seismic susceptibility, will receive higher priority to ensure protection of those benefits. Habitat projects will be undertaken to improve levee habitat corridors in

coordination with the BDAC Ecosystem Workgroup and the Agency Ecosystem Review Team needs.

- Subsidence control plan of action. A provision to acquire easement up to 400-feet in width from the crown along levees with reimbursement from Senate Bill 34 has been little used by Delta farmers since 1988 and an alternate method to encourage farmers to avoid farming up to the levee slope as a subsidence control measure will instead be investigated. In addition, there will be emphasis on subsidence control reduction based on research results into "capping" and other techniques which maximize accretion. Utilizing GIS technology, parameters that have been found through ongoing research to effect subsidence (organic content, depth of peat, etc.) will be mapped to aid land use planning decisions for subsidence control.
- Cost sharing procedures (Ability to pay) will include a comprehensive study to identify each Local Agency's ability to cost share for flood control projects. In addition, other beneficiaries (e.g. wildlife habitat, recreational developments, highways and railroads, natural gas fields, utility lines, major aqueducts, other public developments, etc.) will be investigated to quantify the benefits they receive. Also, applicable federal programs will be investigated.
- Levee habitat banking policies and procedures. Both the State (1993) and Federal government (1995) have drafted guidance for the protection of wetland habitat through the use of wetland mitigation banking. Habitat banking for other habitat types on levees may be dealt with similarly. These banking guidelines will be reviewed for their applicability to a CALFED levee habitat banking program and will be integrated into CALFED's larger, regional habitat management plan for the Delta. Substantial coordination with DFG and federal agency staff will be required to develop a comprehensive mitigation bank that will satisfy the potential mitigation needs for wetlands, uplands, aquatic ecosystems and listed plant and animal species on levees.
- Beneficial Reuse policies and procedures. Current reuse practices involve the stockpiling of dredge material as a source of material for levee work. With the identified need for suitable material for levee maintenance and repair, the Special Projects Program will coordinate with dredging projects to augment on-island stockpiles where it is appropriate and will study the applicability of creation of in-stream sediment traps that can be "harvested" on frequent intervals, propose recommendations for legislative action to promote beneficial reuse of dredge material, and propose measures to streamline the permitting of disposal of sediment from brackish sources. These efforts will be coordinated closely with the Regional Water Quality Control Board and the San Francisco Bay Long Term Management Strategy (LTMS) program for the upland utilization of in-Bay dredge material.

- Delta levee emergency response plan. In coordination with existing law, State, federal, and local agencies, a comprehensive emergency response plan will be developed to utilize the appropriate available resources to prevent the occurrence and severity of flood threatening incidents. Included in this plan will be standardized contracts for emergency levee work, criteria for eligible levee work, definition of an emergency levee event, establishment of a multi-agency response team, documentation requirements to streamline reimbursements, and stages of emergency response. Part of the emergency response plan could include the development of an insurance fund to integrate existing disaster assistance funding sources with contributions from Delta landowners and other identified beneficiaries to insure availability of funding to quickly respond to an emergency to avoid levee failure and/or repair and restore flooded islands.
- Delta levee seismic analysis. Delta levee seismic susceptibility will be explored by continuing research that began with the Department of Water Resources' Phase I Delta Seismic investigation. Since there are a great many unknowns regarding the dynamic properties of the peaty foundation layers which commonly exist beneath the levee system, the continued research will attempt to reduce the major uncertainties by: installing strong-motion accelerometers at three to four levee sites in the Delta; creating a geologic model for deeper soil deposits; field and laboratory testing to better determine the static and dynamic properties of organic soils; field and laboratory testing to better determine liquefaction potential; and investigate the potential activity of the Coast Range-Sierra /Nevada Boundary Zone. These efforts will be closely coordinated with the USGS, UCD, and interested stakeholders.

A proposed schedule for defining, reviewing, and refining these elements in coordination with the various interests is attached.

leveewk3.pl

CALFED Bay-Delta Program Workplan Schedule - Levee Issues Technical Team

Component Refinement for 1996

Task Name	Duration	Start	Finish	1996								1997																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Levee and Channel Technical Team Meeting	1d	8/6/96	8/6/96																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

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Task Name	Duration	Start	Finish	1996												1997																		
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Ability To Pay Procedures of Cost Sharing	327d	10/1/96	12/31/97																															
Define "ability to pay" (ATP) procedures of cost sharing	66d	10/1/96	12/31/96																															
Perform economic analysis of local agency's ATP	218d	1/1/97	10/31/97																															
Investigate in-direct beneficiaries of levees and quantify the benefits they rec	218d	1/1/97	10/31/97																															
Prepare cost-sharing recommendations to CALFED/BDAC	43d	11/3/97	12/31/97																															
Levee Habitat Banking Policies and Procedures	327d	10/1/96	12/31/97																															
Define levee habitat banking policies and procedures	66d	10/1/96	12/31/96																															
Coordinate with applicable State&fed agencies to develop comprehensive gui	218d	1/1/97	10/31/97																															
Establish terms for operations and crediting of habitat banks	218d	1/1/97	10/31/97																															
Prepare levee habitat banking recommendations to CALFED/BDAC	43d	11/3/97	12/31/97																															
Beneficial Reuse Policies and Procedures	327d	10/1/96	12/31/97																															
Develop beneficial reuse policies and procedures	284d	10/1/96	10/31/97																															
Coordinate ben. reuse policies/procedures with LTMS, Corps, BCDC, RWQC	284d	10/1/96	10/31/97																															
Prepare reuse policies recommendations to CALFED/BDAC	43d	11/3/97	12/31/97																															
Delta Levee Emergency Response Plan	327d	10/1/96	12/31/97																															
Develop Delta levee emergency response plan	44d	10/1/96	12/1/96																															
Prepare emergency response plan recommendations to CALFED/BDAC	43d	11/3/97	12/31/97																															
Delta Levee Seismic Susceptibility	327d	10/1/96	12/31/97																															

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Review past studies	44d	10/1/96	11/29/96																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																